

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (currently amended): A method for automatically detecting scene changes within a digital video sequence including a succession of frames, comprising:

computing metrics for each of a plurality of frames from a digital video sequence, the metric of a frame being a measure of distance between the frame and a given frame;

identifying ~~[[one]]~~ a candidate frame from the plurality of frames for which the metric of the candidate frame differs from the metric of the predecessor frame to the candidate frame, by at least a first threshold;

determining whether the metrics of successive ones of each of a first plurality of frames, successively following the candidate frame, differ from one another by less than a second threshold; ~~[[and]]~~

further determining whether the metrics of each frame of a second plurality of frames, successively preceding the candidate frame, are larger than a third threshold; and

marking the candidate frame as a scene change when the determining determines that the metrics of successive ones of each of the first plurality of frames differ from one another by less than the second threshold, and when the further determining determines that the metrics of each frame of the second plurality of frames are larger than the third threshold; and
repeating each of the method operations for a next candidate frame.

Claim 2 (original): The method of claim 1 wherein the measure of distance is based on color histograms of frames.

Claim 3 (original): The method of claim 2 wherein the measure of difference is a sum of absolute values of differences of histogram frequencies.

Claim 4 (original): The method of claim 2 wherein the measure of difference is a sum of squares of differences of histogram frequencies.

Claim 5 (canceled)

Claim 6 (currently amended): The method of claim [[5]] 1 wherein said marking does not mark the candidate frame as a scene change frame if a frame preceding the candidate frame is substantially similar to a current frame.

Claim 7 (currently amended): A system for automatically detecting scene changes within a digital video sequence including a succession of frames, comprising:

a processor computing metrics for each of a plurality of frames from a digital video sequence, the metric of a frame being a measure of distance between the frame and a given frame;

a frame identifier identifying and marking [[one]] a candidate frame for which the metric of the candidate frame differs from the metric of the predecessor frame to the candidate frame, by at least a first threshold; [[and]]

a comparator determining whether the metrics of successive ones of each of a first plurality of frames, successively following the candidate frame, differ from one another by less than a second threshold, and determining whether the metrics of each frame of a second

plurality of frames, successively preceding the candidate frame, are larger than a third threshold; and

a scene change marker marking the candidate frame as a scene change frame, when the comparator determines that the metrics of successive ones of each of the first plurality of frames differ from one another by less than the second threshold, and that the metrics of each frame of the second plurality of frames are larger than the third threshold.

Claim 8 (original): The system of claim 7 wherein the measure of distance is based on color histograms of frames.

Claim 9 (original): The system of claim 8 wherein the measure of distance is a sum of absolute values of differences of histogram frequencies.

Claim 10 (original): The system of claim 8 wherein the measure of distance is a sum of squares of differences of histogram frequencies.

Claim 11 (canceled)

Claim 12 (currently amended): The system of claim ~~[[11]]~~ 7 wherein said scene change marker does not mark the candidate frame as a scene change frame if a frame preceding the candidate frame is substantially similar to a current frame.

Claims 13-36 (canceled)

U.S. Application No. 09/675,358
Amdt. dated March 22, 2005
Reply to Advisory Action of March 15, 2005

Claim 37 (canceled)